REMARKS/ARGUMENTS

Claims 28-54 were pending in this application when last examined by the Examiner. Claims 28 and 48 have been amended. Claims 30 and 45-47 have been canceled. The amendments find support in the original specification, claims, and drawings. No new matter has been added. In view of the amendments and remarks that follow, reconsideration and an early indication of allowance of the now pending claims 28-29, 31-44, and 48-54 are respectfully requested.

The specification is objected to because the Amendment dated October 22, 2010, allegedly introduces new matter into the disclosure. The objected new matter has now been canceled from the specification. Withdrawal of the objection to the specification is respectfully requested.

Claims 28-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khan et al. (US 5828812) in view of Kliffken et al. (US 6630808). Applicant respectfully traverses this rejection.

Amended claim 28 now adds the limitation that "the deceleration of the adjustment movement of the drive device is determined from a change in at least one of a period length, a motor current, and a motor voltage of a drive motor of the drive device." This finds support in previously presented claim 30.

Amended claim 28 further adds the step of "utilizing an adaptation device comprising an additional neural adaptation network; . . . wherein the neural adaptation network calculates, from an actual period length at an actual motor voltage, a reference period length at a reference voltage, the reference period length being dependent on a position of the component being driven by the drive device; and wherein the neural adaptation network inputs the reference period length to an input neuron of the neural network as an additional input signal." This finds support in previously presented claims 45 to 47 and in addition in lines 8 to 21 of page 28 of the English translation of the original international (PCT) application.

None of the cited references teach of suggest all of the limitations of amended claim 28.

In particular, none of the cited references teach the step of utilizing an adaptation device comprising an additional neural adaptation network within a method for monitoring an adjustment movement of a component in a motor vehicle.

In this regard, Kliffken et al. (US 6,630,808 B1) discloses a method of electronically monitoring and controlling a process for moving and/or positioning at least one window and/or sunroof of a motor vehicle to provide protection from pinching. Within the method, an input variable, for example a drive voltage, and an output variable, for example a window position, is supplied to a detection device. A model in the form of a differential equation is stored, the differential equation herein describing the process for moving and/or positioning the window and/or sunroof in terms of process parameters in the detection device.

As explained in column 1, lines 50 to 59 of Kliffken et al., the method according to Kliffken et al. is based on an approach which is based on a physical description of the adjustment procedure. The description takes place based on a model that reflects the adjustment procedure. Using this model, typical process variables are found and optimized with consideration for measured input and output variables that are characteristic for the process.

Khan et. al. (US 5,828,812) discloses a recurrent, neural network-based fuzzy logic system including a rule base layer and a membership function layer neurons which each have a recurrent architecture with an output to input feedback path including a time relay element and a neural weight. Hence, Khan et al. describes, in a general fashion, the use of a neural network within intelligent controllers.

As pointed out in Applicant's Amendment dated October 22, 2010, the approach of Khan et al. is not compatible to the method of electronically monitoring and controlling a process for moving a vehicle window as described by Kliffken et al. The approach of Kliffken et al. is based on a complete physical description in terms of differential equations of the movement of a vehicle window and an adjustment mechanism used for this purpose. In contrast, Kahn et al. use a self-learning neural network which does not rely on a physical model of a real process (for example the movement of an element to be adjusted).

However, even if assuming, *arguendo*, that a person skilled in the art would consider applying the neural network as taught by Khan et al. to the method of Kliffken et al., such a skilled person would not arrive at the method as claimed in independent claim 28 of the instant application. In particular, the person skilled in the art would not derive, when combining the teachings of Kliffken et al. and Khan et al., at the further step of utilizing an adaptation device comprising an "additional neural adaptation network," wherein the neural adaptation network calculates, from an actual period length at an actual motor voltage, a reference period at a reference voltage, the reference period length being dependent on a position of the component being driven by the drive device, and wherein the neural adaptation network inputs the reference period length to an in input neuron of the neural network as an additional input signal.

That is, amended claim 28 is directed towards a method for monitoring an adjustment movement of a component in a motor vehicle making use of a neural network in combination with an additional neural adaptation network. The neural adaptation network in this regard has the purpose of providing a normalized period length to an input neuron of the (main) neural network, the (main) neural network than determining and outputting at its output neuron an output value corresponding to one of an adjusting force and a trapped state and a nontrapped state of the component.

As described between page 27, line 25 and page 28, line 21 of the English translation of the original international (PCT) application, the neural adaptation network has the function of normalizing the period length that is input to the input layer of the (main) neural network for determining a correct output value. This is based on the background that the period length of a motor of a drive device might change with changing motor voltage. A change in the period length in this case, however, does not hint towards a pinching situation in a drive device. Therefore, to avoid errors due to a changing motor voltage, the period length is normalized to a reference period length at a reference voltage.

If, for example, the actual motor voltage is 9 V and an actual period length is measured, from the actual period length a reference period length is computed which indicates the period

length the actual period length would correspond to at a reference voltage, for example 13 Volts. For this computation, an additional neural adaptation network is used.

Hence, the method according to claim 28 of the instant application makes use of two neural networks, a first neural network being used to determine an output value corresponding to one of an adjusting force, a trapped state and a non-trapped state of the component, and a second neural adaptation network being used to feed a normalized period length to the first neural network.

Neither Kliffken et al. nor Khan et al. even hint towards using two neural networks in combination within the method for monitoring an adjustment movement of a component in a motor vehicle. Kliffken et al. does not teach nor suggest the use of any neural network. Khan et al. teaches, in general terms, a specific neural network.

Further, neither Khan et al. nor Kliffken et al. refer to the problem of inputting a normalized period length to the input layer of a neural network for monitoring an adjustment movement of a component in a motor vehicle. In this regard, Khan et al. does not even hint at determining such a normalized period length by an additional neural network. Accordingly, claim 28 is now in condition for allowance.

Claims 29, 31-44, and 48-54 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain.

In view of the above amendments and remarks, Applicant respectfully requests reconsideration and an early indication of allowance of the now pending claims 28-29, 31-44, and 48-54.

Respectfully submitted,
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